ABSTRACT

A semiconductor device includes a silicon substrate and a gate dielectric film provided on the silicon substrate. The gate dielectric film includes at least a first oxide film and an oxynitride film formed on the first oxide film. A peak position of a concentration of nitrogen of the gate dielectric film is located in a range of 0.5 nm – 1.5 nm from a surface thereof, and in a range of 0.3 nm – 2.0 nm from an interface thereof with the silicon substrate, and an element concentration peak of the nitrogen is 7×10^{21} or greater.